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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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ST. ONGE STEWARD JOHNSTON & REENS, LLC			HENN, TIMOTHY J	
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STAMFORD, CT 06905-5619			PAPER NUMBER	

2612

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/039,931

Applicant(s)

AMLING ET AL.

Examiner

Timothy J. Henn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 6 and 8-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 6 and 8-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2 September 2005 has been entered.

Response to Arguments

2. Applicant's arguments filed 2 September 2005 have been fully considered but they are not persuasive. Regarding Applicant's arguments that Nakamura does not disclose executing the software program on the programmable hardware device the examiner notes that this limitation is not supported by the specification. For example, Figure 2 discloses that the microprocessor 64 executes the program and page 11 discloses configuring the programmable control unit 20 to process image data, but no discussion is given of executing the program on the programmable control unit 20. Therefore, the limitations containing executing the program on the programmable unit are new matter and will not be considered.

Regarding Applicant's arguments that the circuit data of Nakamura can not be considered a "software program" it is noted that The IEEE Standard Dictionary of Electrical and Electronics Terms, Sixth Edition defines "software" on page 1006 to be

"Computer programs, procedures, and associated documentation and data pertaining to the operation of a computer system". The examiner notes that the circuit data of Nakamura meets at the very least the "data" section of this definition and further submits that it would meet the "procedures" section since the data describes the image processing procedure which is performed by the LCA once configured. The examiner further notes that Nakamura discloses that the circuit data (i.e. "software program") can be stored remotely from the camera control unit (e.g. in data ROMs 19 and 20).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, since Chiloyan discloses downloading device related software pertaining to a peripheral device eliminates the need for the user to insert media into the host computer device (e.g. the memory card 64, 65 of Nakamura), improved plug and play capability can be obtained. Therefore, the reference does provide motivation and the rejections will be maintained.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir.

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1986).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1, 6, 8-16 and 27-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

[claims 1, 6, 8-16, 27-32]

Regarding claims 1, 6, 8-16 and 27-32 the specification does not describe in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the invention of configuring a programmable hardware device using a software program and executing the software program on the programmable hardware device to enable processing of image data from a camera head. While the specification describes configuring a programmable hardware device to enable the processing of image data (e.g. Page 11), there is no discussion of executing the program on the programmable hardware device portion of the camera control unit. For the purposes of art rejection, the limitation of

executing the software program on the programmable hardware device will not be considered.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 6, 8-11, 14, 16, 17, 19, 20 and 27-29, 33 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura et al. (US 5,627,583).

[claim 1]

In regard to claim 1, Nakamura discloses a video imaging system (Figure 7), comprising: a camera head for transmitting image data (Figure 7, Items 1 and 2); a camera control unit for receiving and processing said image data from said camera head (Figure 7, Item 3) containing at least one programmable hardware device (Figure 7, Item 16); a storage device accessible by said camera control unit (Figure 7, Items 64 and 65); said storage device containing a software program (c. 4, ll. 44-57); said software program executing on said camera control unit for modifying hardware (c. 4, ll. 5-8) of said camera control unit to process said image data by configuring the programmable hardware device (c. 4, ll. 44-57)

[claim 6]

In regard to claim 6, Nakamura discloses a video imaging system wherein said camera control unit comprises a field programmable gate array (Figure 7, Item 16; c. 4, ll. 5-8) and a CPU or "microprocessor" (Figure 7, Item 66).

[claim 8]

In regard to claim 8, Nakamura discloses an alternate embodiment wherein said storage device is located within said camera head (Figure 2).

[claim 9]

In regard to claim 9, Nakamura discloses an alternate embodiment wherein the storage device is located within the camera control unit (Figure 6).

[claim 10]

In regard to claim 10, Nakamura discloses a video imaging system wherein the storage device includes a removable, replaceable memory unit (Figure 7, Items 64 and 65).

[claim 11]

In regard to claim 11, Nakamura discloses a video imaging system wherein said storage device (Figure 2, Items 19 and 20) is remotely accessible (i.e. accessible by the camera control unit while the storage device is connected to the camera head).

[claim 14]

In regard to claim 14, Nakamura discloses a video imaging system wherein said program enables said camera control unit to issue commands to said camera head (c. 4, ll. 58-59).

[claim 16]

In regard to claim 16, the examiner notes that by the signal processor 16 of Nakamura providing driving signals to the CCD of the camera head, the camera head inherently adjusts operating characteristics as claimed.

[claim 17]

In regard to claim 17, Nakamura discloses a video imaging system comprising: a camera for transmitting image data (Figure 7, Items 1 and 2); a camera control unit for receiving and processing the image data from said camera (Figure 7, Item 3); a storage device remotely located from and accessible by said camera control unit (Figure 2, Items 19 and 20; The examiner notes that as broadly as claimed, the data ROMs 19 and 20 contained in the camera head can be considered "remotely located" since they are inside the camera control unit 3); software executing on said camera control unit for receiving a software program stored on said storage device (c. 4, ll. 44-57); and said software program executing on said camera control unit for modifying hardware (c. 4, ll. 5-8) of said camera control unit for receiving the image data (c. 4, ll. 44-57).

[claim 19]

In regard to claim 19, Nakamura discloses a video imaging system further comprising software executing on said camera control unit for downloading said program when said camera is in communication with said camera unit (c. 7, l. 66 - c. 8, l. 10).

[claim 20]

In regard to claim 20, Nakamura discloses a video imaging system wherein the storage device (Figure 2, Items 19 and 20) is a remote (i.e. on the camera) location.

[claim 27]

In regard to claim 27, Nakamura discloses a video imaging system comprising: a camera control unit for receiving and processing image data (Figure 7, Item 3); a software program for enabling said camera control unit to process the image data (c. 7, ll. 57-62); a configurable hardware device located on said camera control unit for processing the image data (Figure 7, Item 16); a processor located on said camera control unit for executing said program (Figure 7, Item 66); and said software program executing on said processor for modifying said configurable hardware device and enabling said camera control unit to process the image data (c. 7, ll. 57-65).

[claim 28]

In regard to claim 28, the examiner notes that if a first endoscope is replaced by a second endoscope as described in Nakamura, a pre-existing program would inherently be located on the configurable hardware device.

[claim 29]

In regard to claim 29, the examiner notes that if a first endoscope is replaced by a second endoscope as described in Nakamura, a pre-existing program located on the configurable hardware device would inherently be overwritten when the circuit data for the second endoscope is written to the programmable hardware device.

[claim 33]

Regarding claim 33, Nakamura discloses a video imaging system, comprising: a camera for transmitting image data (Figure 2, Items 1 and 2); a configurable hardware device for receiving and processing the image data from the camera (Figure 2, Item 3) and a storage device remotely located from and accessible by the configurable hardware device (Figure 2, Items 19 and 20), software executing on the configurable hardware device for receiving a software program stored on the storage device and said software program executing on the configurable hardware device for modifying hardware of the configurable hardware device for receiving image data (c. 4, ll. 18-57).

[claim 34]

Regarding claim 34, Nakamura discloses a video imaging system comprising a camera for transmitting image data (Figure 2, Items 1 and 2); a configurable hardware device for receiving and processing the image data from the camera (Figure 2, Item 3); said configurable hardware device including a configurable portion (Figure 2, Item 16) and a non-configurable portion (Figure 2, Item 18); a software program executing on the non-configurable portion of the configurable hardware device (c. 4, ll. 18-57); a storage device having configuration data stored thereon and accessible by the configurable hardware device (Figure 2, Items 19 and 20); said non-configurable portion of the configurable hardware device receiving the configuration data and the software program modifying the configurable portion of the configurable hardware device based on the configuration data for receiving the image data (c. 4, ll. 44-57).

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 12, 13 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (US 5,627,583) in view of Chiloyan et al. (US 2002/0095501 A1).

[claim 12]

In regard to claim 12, Nakamura discloses all limitations except for a storage device which is an intranet location. Chiloyan discloses a system which automatically downloads device control information from remote storage devices such as intranet locations (Paragraph 0034) to fully automate the download of control information and eliminate the need for the user to insert disks or "memory cards" and provide plug-and-play capability (Paragraph 0009). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the system of Nakamura to automatically download control information from intranet locations to eliminate the need for the user to insert disks or "memory cards" and provide plug-and-play capability.

[claim 13]

In regard to claim 13, Nakamura discloses all limitations except for a storage device which is an internet location. Chiloyan discloses a system which automatically downloads device control information from remote storage devices such as internet locations (Paragraph 0034) to fully automate the download of control information and

eliminate the need for the user to insert disks or "memory cards" and provide plug-and-play capability (Paragraph 0009). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the system of Nakamura to automatically download control information from internet locations to eliminate the need for the user to insert disks or "memory cards" and provide plug-and-play capability.

[claim 21]

In regard to claim 21, Nakamura discloses all limitations except for a storage device which is an internet location. Chiloyan discloses a system which automatically downloads device control information from remote storage devices such as internet locations (Paragraph 0034) to fully automate the download of control information and eliminate the need for the user to insert disks or "memory cards" and provide plug-and-play capability (Paragraph 0009). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the system of Nakamura to automatically download control information from internet locations to eliminate the need for the user to insert disks or "memory cards" and provide plug-and-play capability.

9. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (US 5,627,583) in view of Oshima (US 6,638,212).

[claim 15]

In regard to claim 15, Nakamura discloses all limitations except for a camera head which sends confirmation to the camera control unit that the commands were received and have been execute. Oshima discloses an endoscope system wherein a camera control unit sends commands to a camera head, and the camera head transmits a response indicating whether the commands were properly executed or not (Figures 11 and 12). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement a system such as that taught by Oshima in the system of Nakamura to determine whether commands that were transmitted to the camera head from the camera control unit were received and properly executed or not.

10. Claim 18, 22-24, 26 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (US 5,627,583) in view of Dowdy et al. (US 6,295,082).

[claim 18]

In regard to claim 18, Dowdy discloses Nakamura discloses all limitations except for software executing on the camera control unit for determining when said camera is in communication with the camera control unit. Dowdy teaches an endoscope system which detects when a camera head is attached to the camera control unit and automatically downloads information about the camera head from the camera head to the camera control unit (Figure 3; c. 5, ll. 9-31). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a system

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for detecting when the camera head is connected to automate the process of downloading information from the camera head to the camera control unit of Nakamura.

[claim 22]

In regard to claim 22, Nakamura discloses a video imaging system for transmitting image data (Figure 2, Items 1 and 2); a camera control unit for receiving and processing the image data from said camera (Figure 2, Item 3); a storage device accessible by said camera control unit (Figure 2, Items 19 and 20); software executing on the camera control unit for receiving a program stored on said storage device when said camera is in communication with said camera control unit (c. 4, ll. 44-57); said program executing on said camera control unit for modifying a configurable portion of said camera control unit (c. 4, ll. 44-57); and said program executing on said camera control unit for enabling said camera control unit to process the image data (i.e. by rewriting the FPGA 16; c. 4, ll. 44-57). However, Nakamura lacks software executing on said camera control unit for determining when said camera is in communication with said camera control unit.

Dowdy teaches an endoscope system which detects when a camera head is attached to the camera control unit and automatically downloads information about the camera head from the camera head to the camera control unit (Figure 3; c. 5, ll. 9-31). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a system for detecting when the camera head is connected to automate the process of downloading information from the camera head

to the camera control unit of Nakamura.

[claim 23]

In regard to claim 23, Nakamura discloses a video imaging system wherein the configurable portion further comprises a field programmable gate array (Figure 2, Item 16; c. 4, ll. 5-8).

[claim 24]

In regard to claim 24, Nakamura discloses a video imaging system wherein said program configures said field programmable gate array of said camera control unit to enable it to process image data from said camera (c. 4, ll. 5-8; c. 4, ll. 44-57).

[claim 26]

In regard to claim 26, Nakamura discloses a video imaging system further including a second storage device and processed image data is stored on said second storage device (Figure 2, Item 15).

[claim 30]

In regard to claim 30, Nakamura does not disclose a non-overwritable portion for requesting the program. Official Notice is taken that it is well known in the computing art to provide non-overwritable portions containing a function of writing a program on reconfigurable hardware devices to ensure that the device can function properly even in the event that a new program is improperly written to the array. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a non-overwritable portion to ensure that recovery is possible even when a

program is improperly written.

[claim 31]

In regard to claim 31, see claim 30.

[claim 32]

In regard to claim 32, Nakamura discloses a method for video imaging, comprising the steps of: providing a camera for transmitting image data (Figure 2, Items 1 and 2); providing a camera control unit for processing the transmitted image data (Figure 2, Item 3); retrieving a software program for enabling the camera control unit to be compatible with the camera (c. 4, ll. 44-57); executing the program on the camera control unit (c. 4, ll. 44-57); and configuring a programmable device of the camera control unit to enable the camera control unit to process image data transmitted from the camera (c. 4, ll. 44-57). However, Nakamura lacks a step of determining when the camera is in communication with the camera control unit.

Dowdy teaches an endoscope system which detects when a camera head is attached to the camera control unit and automatically downloads information about the camera head from the camera head to the camera control unit (Figure 3; c. 5, ll. 9-31). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a step for detecting when the camera head is connected to automate the process of downloading information from the camera head to the camera control unit of Nakamura.

11. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (US 5,627,583) in view of Dowdy et al. (US 6,295,082) as applied to claim 22 above, and in further view of Oshima (US 6,638,212).

[claim 25]

In regard to claim 25, Nakamura in view of Dowdy discloses a program enabling the camera control unit to issue commands to the camera (c. 4, ll. 58-59), but lacks a camera sending confirmation to the camera control unit that commands were received. Oshima discloses an endoscope system wherein a camera control unit sends commands to a camera head, and the camera head transmits a response indicating whether the commands were properly executed or not (Figures 11 and 12). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement a system such as that taught by Oshima in the system of Nakamura to determine whether commands that were transmitted to the camera head from the camera control unit were received and properly executed or not.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Henn whose telephone number is (571) 272-7310. The examiner can normally be reached on M-F 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc Yen Vu can be reached on (571) 272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TJH
12/9/2005



NGOOC-YEN VU
PRIMARY EXAMINER